WHAT IS CLAIMED IS:

1.   An image processing apparatus, comprising:
an input unit successively inputting a first image signal
representing density level of each pixel;
a thresholding unit generating a second image signal by comparing
the first image signal input from said input unit with a threshold value;
a calculating unit calculating, based on the second image signal
generated by said thresholding unit and the threshold value used for
generating the second image signal, a threshold value to be used for
thresholding a succeeding pixel; and
a changing unit for enlarging or reducing at least one of a range of
the first image signal input from said input unit and range of the threshold
value calculated by said calculating unit.

2.   The image processing apparatus according to claim 1, wherein
said changing unit changes the range of the first image signal input
from said input unit, and includes a variable unit changing a coefficient
used for changing the range.

3.   The image processing apparatus according to claim 2, wherein
method of calculating the threshold value by said calculating unit is
changed in accordance with the coefficient changed by said variable unit.

4.   The image processing apparatus according to claim 1, wherein
said changing unit changes the range of the threshold value
calculated by said calculating unit, and includes a variable unit changing a
coefficient used for changing the range.

5.   The image processing apparatus according to claim 4, wherein
method of calculating the threshold value by said calculating unit is
changed in accordance with the coefficient changed by said variable unit.

6. A method of image processing, comprising:

an input step of successively inputting a first image signal representing density level of each pixel;

a thresholding step of generating a second image signal by comparing the first image signal input in said input step with a threshold value;

a calculating step of calculating, based on the second image signal generated in said thresholding step and the threshold value used for generating the second image signal, a threshold value to be used for thresholding of a succeeding pixel; and

a changing step of enlarging or reducing at least one of a range of the first image signal input in said input step and a range of the threshold value calculated in said calculating step.

7. An image processing apparatus, comprising:

an input unit successively inputting a first image signal representing density level of each pixel;

a thresholding unit generating a second image signal by comparing the first image signal input from the input unit with a threshold value;

a calculating unit calculating, based on the second image signal generated by said thresholding unit and the threshold value used for generating the second image signal, a threshold value to be used for thresholding a succeeding pixel; and

a changing unit changing ratio of a range of the first image signal input from said input unit and a range of the threshold value calculated by said calculating means.

8. An image processing apparatus, comprising:

an input unit successively inputting a first image signal representing density level of each pixel;

a thresholding unit generating a second image signal by comparing the first image signal input from said input unit with a threshold value; and

a calculating unit calculating, based on said first image signal, said

second image signal and the threshold value used for generating said second image signal, a threshold value to be used for thresholding a succeeding pixel.

9.   The image processing apparatus according to claim 8, wherein said calculating means calculates the threshold value using difference between said second image signal and the threshold value used for generating said second image signal and difference between said first image signal and said second image signal, as parameters.

10.   The image processing apparatus according to claim 9, wherein difference between said first image signal and said second image signal is multiplied by a prescribed coefficient.

11.   The image processing apparatus according to claim 10, wherein said coefficient can be arbitrarily changed.

12.   The image processing apparatus according to claim 8, further comprising:
a first multiplying unit multiplying the first image signal input to said thresholding unit by a prescribed first coefficient, and
a second multiplying unit multiplying the first image signal input to said calculating unit by a prescribed second coefficient.

13.   The image processing apparatus according to claim 12, wherein at least one of said first and second coefficients can be arbitrarily changed.

14.   A method of image processing, comprising:
an input step of successively inputting a first image signal representing density level of each pixel;
a thresholding step of generating a second image signal by comparing the first image signal input in said input step with a threshold value; and

- 30 -

a calculating step of calculating, based on said first image signal, said second image signal and the threshold value used for generating said second image signal, a threshold value to be used for thresholding a

10   succeeding pixel.

15.   An image processing apparatus, comprising:

an input unit successively inputting a first image signal representing density level of each pixel;

first multiplying unit multiplying said input first image signal by a

5   prescribed first coefficient;

a second multiplying unit multiplying said input first image signal by a prescribed second coefficient;

a thresholding unit generating a second image signal by comparing an output of said first multiplying unit with a threshold value including an

10   output of said second multiplying unit; and

a calculating unit calculating, based on the second image signal generated by said thresholding unit and a threshold value used for generating the second image signal, a threshold value to be used for thresholding a succeeding pixel.

16.   The image processing apparatus according to claim 15, wherein at least one of said first and second coefficients can be set by a user.

17.   The image processing apparatus according to claim 15, wherein said first and second coefficients are changed in accordance with an area or feature of an image.